Universal Fine Turning & Roller Finishing
Type 7794



Type 7794 for serial production

Fine Turning and Roller Finishing

The machine Type 7794U-1NC is designed for the fine turning and roller finishing of the thrust faces in consideration of a short cycle time. The process replaces cost effective conventional finishing processes like grinding, polishing, lapping or honing.
Machine type 7794U-2NC is even capable to fine turn additionally the flange reference in the same clamping situation. Thus ensures optimum axial reference between thrust face and flange face.

System Advantages

- Replacement of conventional finishing processes
- Excellent surface quality with residual roughness for the adhesion of oil
- Process without aggressive surface, consequently less wear during initial run-in period
- Roller burnishing results in higher profile bearing area respectively lower bearing load per surface increment in comparison to a grinding process
- Optimum axial reference results by finish processing of as well thrust datum and flange datum in one clamping situation
- Improvement of micro-hardness
- Reduced bearing friction

Economic Advantages

- Finish processing of as well thrust faces as flange faces in only one operation
- Non-polluting process due to dry machining Turning of various materials
- New tool design for higher tool life
- High production availability
- Short floor to floor times
- High output
- High degree of machine production reliability
- Low process and tooling costs
- Low maintenance costs
- Low production costs
- Low energy consumption

Effective Machining Process

The position of the bearing faces relative to the turning tools is governed by the gauging device, thus ensuring identical stock removal, before the headstock and tailstock centers are hydraulically locked in position.
After fine turning a gauging probe ensures correct sizing of the bearing width before the finishing rollers engage against the bearing faces with adjustable controlled pressure which finally achieve a uniform and optimum quality of surface finish and tolerance.

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Technical Data

Crankshaft dimensions			
Length	min.	260	mm
	max.	700	mm
swing diameter	max.	220	mm
center height		1250	mm
bearing width	min.	18	mm
	max.	70	mm
mirror face	max.	12.5	mm
Machine dimensions (all doors closed):			
width including hydraulic unit	appr.	4000	mm
depth incl. electric cabinet and operator panel	appr.	3000	mm
height including cooling units on electrical cabinet	appr.	2500	mm
Machine weight	appr.	5500	kg
Floor space	see layout no.	635 572	A
Electrical data			
total installed power		12	KVA
rated current		30	A
main power supply		3x 400	Volt
main power supply tolerance		± 15	%
frequence		50	HZ
Air pressure requirement			
connecting size		G ½	inch
required line pressure		min. 6	bar /
		0.6	MPa
consumption		appr. 10	m^3/h

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